Abstract

Science is a significant part of human culture and represents one of the pinnacles of human thinking capacity. The eventual aim of science education is to produce individuals capable of understanding and evaluating information that is or purports to be, scientific in nature and of making decisions that incorporate that information appropriately and furthermore, to produce a sufficient number and diversity of skilled and motivated future scientists, engineers, and other science based professionals. Learning of science in schools augments the spirit of enquiry, creativity and objectivity along with aesthetic sensibility. As Yashpal has noted, “science will also have to come forward in changing our thoughts and eradicating various social evils, including casteism, extremism…” One of the goals of the science education is to encourage students to have Scientific Temper for the effects of students’ learning. The most important objective of school science instruction is to make the pupils aware of the scientific methods of the procedure and to inculcate Scientific Temper of mind. The present study discusses the scope of promoting Scientific Temper of students. In the first phase of the study, the investigator found out the perception of secondary school teachers on the existing level of Scientific Temper of their students and the need for enhancing it. For this, survey method was used and data was collected from a sample of 120 secondary school teachers from different districts of Kerala. Findings of the survey revealed that most of the teachers perceived that only a few secondary school students have proper Scientific Temper and hence there is an urgent need for its enhancement. The investigator measured the need by assessing the existing level of Scientific Temper of secondary school students by Scientific Temper Test. For this, a sample of 800 secondary school students were selected based on gender, locality and type of management of schools from different districts of Kerala using stratified random sampling technique. The analysis of the data collected supported the opinion of the teachers. There arose the significance of developing a Scientific Temper Package for secondary school students. The second phase of the study was dealt with the preparation and testing of the effectiveness of Scientific Temper Package. Experimental method was adopted for testing the Scientific Temper Package of students. Non equivalent pretest - posttest design was used with a sample of 328 secondary school students. The effectiveness of the package was tested on some other related cognitive and affective variables such as Self Regulation, Achievement in Biology, Scientific Creativity, Science Interest and Social Sensitivity. The statistical techniques used for the present study were t test, ANOVA and ANCOVA. The findings of the study made it clear that the prepared package is effective in enhancing Scientific Temper, Self Regulation, Achievement in Biology, Scientific Creativity, Science Interest and Social Sensitivity of secondary school students.